

REMARKS

Favorable reconsideration of this application is respectfully requested.

Claims 1-11, 13 and 16-25 are pending within this application. Claims 1-3, 18 and 21-24 are amended herein. Claims 14-15 are canceled herein. No claims have been allowed.

Claims 1-11 and 13-24 stand rejected under 35 U.S.C. 112, first paragraph, for failure to comply with the written description requirement.

Claims 1, 4-11 and 13-24 also stand rejected under 35 U.S.C. 112, first paragraph due to lack of enablement within the context of the presence of a dopant applicant's Si-containing over-layer within applicant's silicon-on-insulator structure.

Both of the foregoing rejections are thus derived from lack of an explicit recitation that dopant species are present in applicant's Si-containing over-layer within applicant's silicon-on-insulator structure. The Examiner suggests that applicant's recitations within claims 2-3 may be pertinent with regard to enablement.

In response, applicant has amended claims 1-3, 23 and 24 accordingly, in a fashion which applicant believes to address the Examiner's concerns.

Support for newly amended claims 1-3, 24 and 25 within the context of applicant's Si-containing substrate being doped is found within paragraph 0027. Support for newly amended claims 1-3, 24 and 25 within the context of a hydrogen containing annealing for reduction of excess dopant species within applicant's Si-containing over-layer is found in paragraph 0048 as newly amended.

With regard to the instant amendment to paragraph 0048, applicant has amended paragraph 0048 to more clearly and internally consistently state that it is a “level of dopant species” that is reduced within applicant’s Si-containing over-layer upon hydrogen annealing. Please also note that paragraph 0027 teaches common usage of both ion implantation methods and bulk diffusion methods for forming doped semiconductor substrates. Please also further note that although dopants are ion implanted as dopant ions, implicitly they are nonetheless not necessarily present within semiconductor substrates as ionic species, but rather presumably generally present as neutral species.

At paragraph 2 of the outstanding Office Action, the Examiner comments in-depth regarding applicant’s definition and use of the terminology “porosity.” However, given that: (1) the Examiner concludes that an applicant may be the applicant’s own lexicographer; and (2) the Examiner has denominated no specific claims rejection within the context of paragraph 2, applicant can make no meaningful response to the Examiner’s comments at paragraph 2. For similar reasons, applicant is also unable to comment regarding the Examiner’s comments at paragraph 6.

Claims 18-22 stand rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In response, applicant has amended claims 18 and 21-22 accordingly.

Claims 1-11 and 13-25 stand rejected under 35 U.S.C. 102(e) as being anticipated by Bendernagle et al. (U.S. Patent No. 6,800,518; hereinafter “Bendernagle”).

As an initial consideration, “[a] claim is anticipated only if each and every element set forth in the claim is found, either expressly or inherently described, in a single prior art

reference.” MPEP 2131 (citing *Verdegaal Bros. v. Union Oil of California* (citation omitted)). Thus, anticipation under 35 U.S.C. 102 requires a clear disclosure within a single prior art reference of all limitations or elements of an applicant’s claimed invention.

In response with respect to the Examiner’s rejection of claims 1 and 23-24 under 35 U.S.C. 102(e) over Bendernagle, applicant has amended claim 1, claim 23 and claim 24 to recite that applicant’s ion implantation of oxygen ions is a blanket ion implantation to a uniform depth (i.e., across an entire substrate or wafer). Support for the foregoing limitations of claim 1, claim 23 and 24 is found within claim 14 (which is now canceled along with claim 15), as well as within paragraph 0027 as newly amended, which in turn finds support within FIG. 2C as originally filed.

In comparison, Bendernagle at col. 7, last paragraph, col. 8, first paragraph and col. 9 next to last paragraph, teaches other than a blanket ion implantation of oxygen ions to a uniform depth across a Si-containing substrate.

Thus, since each and every limitation within applicant’s invention as taught within claim 1, claim 23 and claim 24 is not taught within Bendernagle, in particular with respect to a blanket oxygen ion implantation method that provides a uniform implanted oxygen species depth across a Si-containing substrate, applicant asserts that claim 1, claim 23 and claim 24, and the remaining claims dependent thereupon within this application, may not properly be rejected under 35 U.S.C 102(e) as being anticipated by Bendernagle.

In light of the foregoing response, applicant respectfully requests that the Examiner’s foregoing enumerated claims rejections, be withdrawn.

In light of the foregoing remarks, applicant respectfully requests reconsideration of, and early allowance of, the claims pending within this application.

Respectfully submitted,



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